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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/692,927	10/20/2000	Richard Stirling-Gallacher	450117-02828	8382
20999	7590	06/20/2006	EXAMINER	
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		ART UNIT		PAPER NUMBER
		2611		

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/692,927	STIRLING-GALLACHER, RICHARD	
	<b>Examiner</b> Phuong Phu	<b>Art Unit</b> 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 March 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 11, 12, 14-16 and 18-24 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 11, 12, 14-16 and 18-24 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. This Office Action is responsive to the Amendment filed on 3/20/06.

### ***Claim Objections***

2. Claim 15 is objected to because of the following informalities:

Claim 15 recites the limitation “a first subset of the plurality of decoding units” on lines 9-10. It is unclear whether this limitation refers to the limitation “a first subset of the plurality of decoding units” previously recited on lines 5-6.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11, 12 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

-Claim 11 omits structural/connectional/functional interrelationship of the element “second decoding unit” with the element “first decoding unit”, and omits structural/connectional/functional interrelationship of each of the elements “normalization units” to one another and to the elements “first decoding unit” and ‘second decoding unit’ in order to make the claimed turbo decoder as a completely connective and operative device.

Claim 11 recites the limitation “a first decoding unit; a second decoding unit, wherein the first decoding unit and second decoding unit are arranged accordingly to a “parallel or serial scheme”. It is unclear about a connectional interrelationship of the input/output of the “second

decoding unit” with the input/output of the “first decoding unit” which is arranged in the “parallel or serial scheme”, for instance, in order to clarify whether the input of the first decoding unit is connected to the input of the second decoding unit or connected to the output of the second decoding unit, or whether the output of the first decoding unit is connected to the input of the second decoding unit or connected to the output of the second decoding unit.

Claim 11 recites the limitation “at least a first normalization unit located at an output side of the first decoding unit wherein a number of normalization units is smaller than the number of decoding units”. It is unclear about the connectional interrelationship of each of the “normalization units” to one another and to the first decoding unit and the second decoding unit. The limitation “at least a first normalization unit located at an output side of first decoding unit” renders the claim unclear whether the input of the at least “first normalization unit” is connected to the output of the first decoding unit or not connected at all, or whether the output of the at least “normalization unit” is connected to the output of the first decoding unit or not connected at all.

-Similarly, claim 12 omits structural/connectional/functional interrelationship of the element “second decoding unit” with the element “first decoding unit” with reasons set forth for claim 11.

-Similarly, claim 14 omits structural/connectional/functional interrelationship of the element “second decoding unit” with the element “first decoding unit”, and omits structural/connectional/functional interrelationship of each of the elements “normalization units” to one another and to the elements “first decoding unit” and ‘second decoding unit” with reasons set forth for claim 11.

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5. Claims 15, 16, 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

-Claim 15 recites the limitation “said plurality of decoding units are arranged according to a parallel or serial scheme”. The limitation renders the claim unclear about a connectional interrelationship of the input/output of each of the decoding units with the input/output of the rest of the decoding units which is arranged in the “parallel or serial scheme”.

Claim 15 recites the limitation “at least a first normalization unit at an output of at least a first subset of the plurality of decoding units”. The limitation renders the claim unclear whether the input of the first normalization unit is connected to the output of the first subset of the plurality of decoding units, or whether the output of the first normalization unit is connected to the output of the first subset of the plurality of decoding units.

Claims, depended on claim 15, are therefore also rejected.

6. Claims 15, 16, 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

Claim 15 omits step(s) showing interrelationships between step “**using** at least a first normalization unit at an output of at least a first subset of the plurality of decoding units” and step “**using** a plurality of decoding units, wherein said plurality of decoding units are arranged according to a parallel or serial scheme” in order to show how the result of function “**using** a plurality of decoding units” affects the operation of function “**using** at least a first normalization unit at an output of at least a first subset of the plurality of decoding units” or vice versa.

Claim 15 omit step(s) showing interrelationships of step “normalization data obtained from each of the plurality of decoding units with a respective normalization factor” with step “using a plurality of decoding units” and/or with step “using at least a first normalization unit” in order to show how functionally the corresponding steps affect each other.

Claims, depended on claim 15, are therefore also rejected.

7. Claims 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

-Claim 21 omits structural/connectional/functional interrelationship of the element “second decoding unit” with the element “first decoding unit” for making the claimed turbo decoder as a completely operative connective device.

Claim 21 recites the limitation “a first decoding unit; a second decoding unit, wherein the first decoding unit and second decoding unit are arranged according to a parallel or serial scheme”. It is unclear about a connectional interrelationship of the input/output of the “second decoding unit” with the input/output of the “first decoding unit” which is arranged in the “parallel or serial scheme”, for instance, in order to clarify whether the input of the first decoding unit is connected to the input of the second decoding unit or connected to the output of the second decoding unit, or whether the output of the first decoding unit is connected to the input of the second decoding unit or connected to the output of the second decoding unit.

-Claim 21 recites the limitation “a plurality of normalization units, at least one of the plurality of normalization units located at an output side of the first decoding unit, wherein said first decoding unit is used a plurality of times, each of said plurality of times generates an output,

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and wherein only a subset of said outputs is normalized with the at least one of said plurality of normalization units. Claim 21 omits structural/connectional/functional interrelationship of the rest of “plurality of normalization units” (besides the “at least one of the plurality of normalization units”) with one another and with the “first decoding unit” and the ‘second decoding unit” for making the claimed turbo decoder as a completely operative connective device.

Claims, depended on claim 21, are therefore also rejected.

***Response to Arguments***

8. Applicant's arguments filed on 3/20/06 have been fully considered, the previous objection and rejections has been withdrawn.

However, the claims, after being amended, are deemed still unallowable because of reasons set forth above in this Office Action.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 571-272-3009. The examiner can normally be reached on M-F (8:00 AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571-272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Phuong Phu*

Phuong Phu  
06/08/06

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**PRIMARY EXAMINER**

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Art Unit 2611